

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (Currently Amended) A heat spreader module, comprising:
  - a base;
  - a heat spreader member joined on said base, said heat spreader member comprising a composite material including carbon and one of copper and a copper alloy; and
  - an insulating substrate arranged on said heat spreader member,
  - wherein said base, said heat spreader member, and said insulating substrate are joined with a hard solder material having a melting point of not less than 600° C,
  - wherein said base includes a copper alloy which has a proof stress of not less than 45 MPa and a coefficient of thermal conductivity of not less than 270 W/mK when subjected to a heat treatment between 600° and 900°C for 10 minutes, and
  - wherein the copper alloy of said base is any one of:
    - (a) a copper alloy comprising 0.1 to 1.5 mass % Cr and the balance being Cu;
    - (b) a copper alloy comprising 0.1 to 0.5 mass % Zr and the balance being Cu;
    - (c) a copper alloy comprising 0.05 to 0.3 mass % Zr, 0.3 to 1.2 mass % Cr, and the balance being Cu;
    - (d) a copper alloy comprising 0.01 to 1.5 mass % Ag and the balance being Cu;
    - (e) a copper alloy comprising 1.4 to 3.0 mass % Fe, 0.05 to 0.2 mass % Zn, 0.01 to 0.1 mass % P, and the balance being Cu; and
    - (f) alumina-dispersed copper.

Claims 2-3 (Cancelled)

4. (Currently Amended) The heat spreader module according to claim 31, wherein said composite material comprises a C base material impregnated with copper or a copper alloy.

Claims 5-6 (Cancelled)

7. (Original) The heat spreader module according to claim 1, wherein said insulating substrate includes one of AlN and Si<sub>3</sub>N<sub>4</sub>.

Claim 8 (Cancelled)

9. (Original) The heat spreader module according to claim 1, wherein said base has a thickness of not less than 0.5 mm, and said thickness is not more than 40% of an entire thickness of said heat spreader module.

10. (Original) The heat spreader module according to claim 1, wherein an IC chip is arranged on said insulating substrate with an electrode interposed between said IC chip and said insulating substrate.

11. (Original) The heat spreader module according to claim 1, wherein a heat-releasing member is joined under said heat spreader member.

12. (New) A heat spreader module, comprising:

a base;

a heat spreader member joined on said base, said heat spreader member comprising a composite material including SiC and one of copper and a copper alloy;  
and

an insulating substrate arranged on said heat spreader member,

wherein said base, said heat spreader member, and said insulating substrate are joined with a hard solder material having a melting point of not less than 600° C,

wherein said base includes a copper alloy which has a proof stress of not less than 45 MPa and a coefficient of thermal conductivity of not less than 270 W/mK when subjected to a heat treatment between 600° and 900°C for 10 minutes, and

wherein the copper alloy of said base is any one of:

- (a) a copper alloy comprising 0.1 to 1.5 mass % Cr and the balance being Cu;
- (b) a copper alloy comprising 0.1 to 0.5 mass % Zr and the balance being Cu;
- (c) a copper alloy comprising 0.05 to 0.3 mass % Zr, 0.3 to 1.2 mass % Cr, and the balance being Cu;
- (d) a copper alloy comprising 0.01 to 1.5 mass % Ag and the balance being Cu;
- (e) a copper alloy comprising 1.4 to 3.0 mass % Fe, 0.05 to 0.2 mass % Zn, 0.01 to 0.1 mass % P, and the balance being Cu; and
- (f) alumina-dispersed copper.

13. (New) The heat spreader module according to claim 12, wherein said composite material comprises an SiC base material impregnated with copper or a copper alloy.

14. (New) The heat spreader module according to claim 12, wherein said insulating substrate includes one of AlN and Si<sub>3</sub>N<sub>4</sub>.

15. (New) The heat spreader module according to claim 12, wherein said base has a thickness of not less than 0.5 mm, and said thickness is not more than 40% of an entire thickness of said heat spreader module.

16. (New) The heat spreader module according to claim 12, wherein an IC chip is arranged on said insulating substrate with an electrode interposed between said IC chip and said insulating substrate.

17. (New) The heat spreader module according to claim 12, wherein a heat-releasing member is joined under said heat spreader member.